effective, would cause prices to decrease back to competitive levels or even lower.[4] These price reductions could prevent the entrant from recovering the sunk costs. Thus, to state that prices "sufficiently above their competitive levels", say by 20%, is enough to cause entry, overlooks the fact that a sophisticated entrant willing to commit hundreds of millions (if not billions) of dollars to a sunk fiber optic network would surely take account of likely responses of current competitors in the market.

6. The cost characteristics of the long distance market make existing competitors' reactions likely to be more important than in most industries. Long distance is characterized by very high fixed costs of the network and very low marginal costs, e.g. less that 1 cent per minute for AT&T. Economic theory has recognized that the strategic behavior of the incumbent firms will deter entry if they can cause entrants to believe the incumbents can and will economically increase their output after entry occurs.[5] Strategic increases in output by incumbents can cause the entry to be unprofitable because the new entrant will not be able to attract sufficient demand to recoup its sunk costs. Given the extremely low marginal cost of additional supply and the effectively infinite capacity of existing fiber networks, a new entrant would be deterred by the possibility that any of the 3 major long distance carriers, AT&T, MCI, or Sprint, could increase its output sufficiently to make entry unprofitable.[6] If entry proves to be unprofitable, the billion dollar investment in the sunk fiber optic network is unrecoverable.

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[4] This point is recognized in the DOJ and FTC Merger Guidelines (MG, April 2, 1992), ¶ 3.0.

[5] See e.g. the discussion in Tirole, The Theory of Industrial Organization, (MIT Press, 1988, Section 8.2) which discusses sunk costs and barriers to entry.

[6] Indeed, it is generally believed that either MCI or Sprint could carry all of AT&T's traffic in addition to their own traffic on their current networks. Numerous other AT&T witnesses agree that extremely large amounts of excess capacity exist, see e.g. Bernheim and Willig, p. 131, as does AT&T itself, see e.g. Ex Parte Presentation In Support of AT&T's Motion for Reclassification as a Nondominant Carrier, No. 79-252 (FCC April 24, 1994) attached to letter from Charles Ward, AT&T Government Affairs Director to William F. Caton, Acting Secretary of the FCC.

7. Market evidence also demonstrates how sunk costs have created significant barriers to entry: No facilities-based national carrier has entered the long distance market since divestiture. Long distance demand has been growing rapidly (e.g. interstate switched access minutes have an average annual growth rate of over 7% per year since 1990), which is usually one of the most important factors causing new market entry.[7] Yet AT&T, MCI and Sprint were present at divestiture and they still control nearly 90% of the long distance market. In fact, the number of "new entrants" often quoted by AT&T and used by HL (p. 6) gives no information on national facilities-based long distance carriers. Nor do I expect any national facilities-based entry unless the individual BOCs are permitted to provide interLATA service because of the billion dollar sunk cost investment required to enter the long distance market.[8]

8. Other AT&T affiants, Profs. Bernheim and Willig (BW), recognize that significant sunk costs exist for construction of a facilities-based network. However, they argue that sunk costs are "negligible" because entrants can lease unused capacity from facilities-based carriers. (p. 134) BW admit that such a strategy might not work if only a single long distance company existed, but they claim the strategy will work in the current long distance market. However, their theoretical argument collapses on actual market evidence. AT&T, MCI, and Sprint have engaged in "lock-step" pricing with 6 price increases over the past 3 years. Even with these price increases the 3 largest IXCs have maintained a market share of about 88%. If BW's theoretical argument were correct, resellers would have been able to maintain low prices (not following the 6 price increases) and taken away significant market share

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[7] See G. Stigler, The Theory of Price, (MacMillan, 4th ed., pp. 209-210). Professor Stigler states that rates of growth of demand over time will dominate the rate of entry in economic circumstances which have prevailed since divestiture. Thus, the lack of market entry demonstrates even more how significant the barriers to entry are in the long distance market.

[8] As I explained in my first affidavit (¶ 50), substantial sunk cost investment is not required by the BOCs in their operating regions (e.g. Pacific Telesis in California), because they already have fully operational long distance networks in place to provide intraLATA service.

from AT&T, MCI, and Sprint.[9] Thus, the market data directly refute BW's argument that resellers cause Basket 1 services to be competitive.

9. Prof. Hubbard and Lehr also review the various promotion and discount plans offered in the long distance market. (pp. 7ff) However, they do not note that the increased discount plans have been "paid for" by non-discount buyers of long distance, estimated to be about 30-40 million customers of AT&T alone. Indeed, recent data show that only about 36% of AT&T residential long distance calls were made under a discount plan using data collected during the spring and summer of 1994.[10] Thus, non-discount customers made about 64% of long distance calls. Their calls were billed at the Tariff 1 rates which have increased about 11% in the last year. These non-discount customers have paid for the long distance discount plans because AT&T's overall Basket 1 prices for residential and long distance customers have been at the FCC imposed price cap maximum each year, as I stated in my first affidavit (¶ 26 and Table 1). AT&T Basket 1 prices were also at the FCC price cap in 1994. Thus, AT&T offsets price increases for non-discount customers (which as demonstrated in Figure 1 have been increased 6 times in the past 3 years) including the latest increases in December 1994, with increased discounts for other customers. The overall average change each year is (almost) exactly at the level set by the FCC. Thus, competition is not setting prices for Basket 1 services. FCC regulation is setting the prices. AT&T just decides whose long distance prices should be raised and whose prices should be decreased to meet the overall FCC price cap index.[11]

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[9] As I discussed in my first affidavit, a number of these price increases by AT&T were not based on increases in economic costs, but were based on changes in accounting costs which led to an increase in AT&T's price cap ceiling.

[10] This proportion is based on a sample of actual long distance bills from a sample of 7431 households during spring and summer of 1994. Source PNR and Associates, "Long Distance Company Call Plans".

[11] While HL state that "66% of AT&T's residential customers are eligible in any quarter" to receive a discount, they fail to state how many customers actually receive the discount. (p.9) The actual number receiving a discount is much closer to 33%.

10. HL also consider churn among long distance companies (p. 9) to be an indicator of competition. They miss the basic point that the 3 major long distance companies charge essentially the same rates, see Figure 1. These rates are above the competitive level as I described in my first affidavit. The fact that customers switch from one long distance provider to another because of advertising and promotions means that the customers are still paying an above competitive price, but from a new long distance carrier.[12] This behavior occurs in other non-competitive industries where advertising has large effects. For instance, the cigarette industry had high profits over the years 1960-1990.[13] Advertising was high and cigarette smokers often switched brands in response to advertising and promotions. But prices in the cigarette industry remained high because companies rarely competed on the basis of price. With MCI and Sprint following AT&T's price leadership in Basket 1 services, we have an analogous situation in the long distance market.

11. Prof. Hall, an MCI affiant, makes an undocumented assertion (Hall aff., p. 19) that 80% of long distance customers receive a discount. Prof. Hall is wrong. The 1994 sample of 7431 households' long distance bills mentioned above shows that, across all IXCs, only 30.8% used a discount call plan and only 32.4% of the long distance calls were made on a long distance company call plan.[14] Prof. Hall's assertion can be seen to be wrong from another source, as well. Professors Hubbard and Lehr for AT&T state that 66% of AT&T's customers are eligible in each quarter to receive a discount. (HL, p. 9) Since AT&T has a 60% market share, <u>every</u> AT&T customer who is <u>ever</u> eligible for a discount must receive a discount as well as <u>every</u> customer of

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[12] Indeed, advertising expenditure by long distance companies doubled over the 3 year period 1989-1992. According to FCC statistics (Statistics of Communications Common Carriers), AT&T's expenditures increased by 120% over this period. When price is set well above cost as in long distance markets, advertising competition among companies offering virtually identical products often serves to decrease price competition.

[13] Very recently, price discounting has begun to have an important effect in the cigarette industry.

[14] PNR and Associates, "Long Distance Company Call Plans".

all other long distance carriers for Prof. Hall to be correct. Yet only about 1/3 of AT&T's residential customers sign up for a calling plan. Thus, the actual numbers are that about 30.8% of households use a discount call plan while 69.2% do not.[15] These proportions are quite different than the claims of the AT&T and MCI affiants, Profs. Hubbard and Lehr and Prof. Hall.

12. A number of the opponents' economists, e.g. Hubbard and Lehr (pp. 9-10) and Hall (p. 28) claim that AT&T's, and the other IXCs' return on assets demonstrates that the long distance market is competitive. Most economists recognize that accounting rates of return cannot be used to judge competition.[16] Use of accounting rates of return is an especially bad idea here where the prices of telecommunications equipment (e.g. switches) are dropping rapidly and companies report the value of assets at historic cost (less depreciation) for regulatory and accounting purposes. Here, where regulatory accounting rules are used for AT&T the computation is even more meaningless than usual because of the non-economic asset lives used to compute depreciation and asset values. Indeed, HL calculate a q ratio of 0.46 for AT&T later in their affidavit. (p. 36)[17] Under this result AT&T should be doing no investment because its expected return is less than 1/2 of its investment cost. Companies do not invest in the expectation that they will lose money. Or using the HL formula on p. 35 of their affidavit, AT&T's "long run average cost" is over 1.5 times its price so AT&T is losing money on each

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[15] These proportions are similar to reports in the press as well. See e.g. G. Naik, "Costs of Control", Wall Street Journal, March 20, 1995. Mr. Naik states that only 1/3 of U.S. households have enrolled in the discount calling plans of the IXCs.

[16] See e.g. F. Fisher and J. McGowan, "On the Misuse of Accounting Rates of Return to Infer Monopoly Profits," American Economic Review, 1983.

[17] The q ratio is the ratio of the market value of a firm's assets, which is measured by the market value of the firm's outstanding stock and debt, to the replacement cost of the firm's assets. The typical average value of q is around 1.0. Use of non-economic asset lives can well lead to an upward biased estimate of the denominator in the q ratio which will lead to a downward biased estimate of the q ratio.

call it completes.[18] Thus, the HL affidavit's use of accounting measures to calculate economic magnitudes leads to absurd results.

13. Prof. Hall also points to an absence of "monopoly profits" in his criticism of my conclusions. (Hall aff., p. 29) Again, Prof. Hall seems unaware of the problems in using regulatory and accounting rates of return. The FTC decided 13 years ago that accounting rates of return cannot be used to judge the presence or absence of monopoly profits.[19] Indeed, the FTC stated that in industries with significant advertising the usual accounting problems become even worse. Long distance companies spend a significant amount of their revenue on advertising.

B. Price Outcomes in Long Distance

14. Prof. Hubbard and Lehr agree with me that price should be the primary focus of how well competition is working in the long distance market.[20] (p. 5) Price outcomes were the focus of my first affidavit in this proceeding. The data used by HL basically demonstrate my point: long distance prices for Basket 1 services have not decreased over the past few years as would have been expected if the long distance market were competitive.[21]

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[18] Use of the formula on p. 35 of the HL affidavit leads to the expression: AC/P = 2 - q. Since HL calculate the average annual q ratio to be 0.46 for AT&T, this formula yields, AC/P = 1.54, so that AT&T's cost exceeds it price by over 50%. Firms which set price below cost do not survive in the long run because they lose money. Indeed, an old joke among economists is about a firm which sets price below cost but "makes it up with volume". If money is lost on each sale the firm must be unprofitable, but AT&T is earning sizeable profits.

[19] In the Matter of Kellogg Co., 99 FTC 8 (1982).

[20] Other AT&T affiants, in particular Profs. Bernheim and Willig, never examine prices for Basket 1 services in spite of their vehement (theoretical) claim that prices are competitive. It is distinctly odd for economists to claim that a market is competitive without an analysis of actual price outcomes.

[21] Another AT&T affiant, Mr. Sullivan (p. 19), attempts to minimize the importance of this oligopolistic outcome by referring to it as a "submarket" (a long outmoded and disused term of antitrust analysis). Mr. Sullivan fails to note that approximately 100 million customers fall into this "submarket".

(1) In their Figure 1 HL plot the deflated consumer price index (CPI) for interstate toll and the producer price index (PPI) for interstate MTS. For the years 1991-1993 (which are covered in my previous affidavit) it is quite clear that almost no decrease occurred. Indeed the index for interstate toll decreased only from 49 to 47. Since HL use the GDP price deflator for this period (which itself increased from 113.3 to 124.2 over this period), the nominal CPI for interstate toll increased over this period. From 1990 to 1993 the interstate CPI increased from 68.2 to 69.6, and in 1994, the index increased to 75.2. Similarly, the interstate PPI increased during 1990-92 from 107.8 to 109.8, and in 1994 the index increased to 117.7. This price performance is extremely poor since most telecommunications prices were decreasing over that period. For instance, a price index for the 30 largest cellular MSAs over the same period shows prices decreasing by 7% instead of increasing like the price index for long distance. See Figure 2 to this affidavit.

(2) In their Figure 2 HL consider average revenue per minute for AT&T. Again for the years 1990-1993 HL find that the index for MTS decreased only from 100 to 94 after deflation by the Bureau of Labor Statistics (BLS) CPI. Since the BLS CPI decreased by 6% during this period, HL have demonstrated that AT&T revenues per minute were changing at the same rate as the BLS CPI. Again, cellular prices have decreased much more over this same period. Adjusted by the CPI, they have fallen by 8.4%, about 50% more than the amount of the decrease of AT&T's prices. Thus, HL have demonstrated that AT&T's average MTS prices, taking full account of all discounts, decreased by considerably less than cellular prices did over the same period. See Figure 3 to this affidavit. HL have demonstrated my point that the market for residential and small business customers, who are the primary users of MTS, is not competitive.

(3) In their Figure 3 HL plot changes in AT&T's average revenue per minute after removing access charges (again relative to the GDP price deflator). When actual access price decreases of 12% over this period are considered, the HL data demonstrate that net of access AT&T MTS actual prices remained essentially constant over the period 1990-1993.[22] Thus, after all discounts for Basket 1 services are taken into account, the AT&T data used by HL demonstrate that AT&T's average revenue did not decrease once access price reductions are netted out. Thus, AT&T prices are not declining as they should be given cost decreases in the range of 6% per year in addition to the access price decreases of 12% per year.[23] HL have simply demonstrated the point that AT&T's Basket 1 prices are controlled by the FCC price cap, not by competition. Indeed, the price performance of MTS is significantly worse than cellular prices which the DOJ recently claimed were not competitive.[24]

15. Prof. Hall, for MCI, claims that long distance prices have fallen. In his main demonstration, Figure 3 (p. 18) he graphs the real (inflation adjusted) government indices of long distance prices. Note that in his graph this inflation adjusted price index is relatively constant over the period 1990-1993.[25] By contrast, the non-inflation adjusted government price indices increased during this period by 10.3%, with an 11% increase in 1993-1994, in spite of decreasing access costs and lower costs for telecommunications equipment. Using the same deflation technique as Prof.

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[22] Net of access charges AT&T actual prices decrease by only 0.6% over the 4 year period.

[23] The cost decreases have arisen from falling prices of telecommunications equipment, e.g. switches and transmission electronics for fiber optics, as well as increasing productivity because of technological advances in telecommunications.

[24] Memorandum of the U.S. in Response to the Bell Companies' Motions for Generic Wireless Waivers, p. 14, U.S. v. Western Elec. Co., No. 82-0192. (D.D.C. July 25, 1994)

[25] Over the period 1982-1989 long distance prices decreased mostly because of decreases in long distance access costs. However, as Prof. Hall emphasizes "current conditions" in the long distance market are relevant to this proceeding, not the history of the 1980's.

Hall, cellular prices decreased by 15% over this same period when long distance prices were almost constant.

16. Prof. Hall also provides an index of revenue per minute for AT&T, MCI, and Sprint. (Fig. 4, p. 21) First, note the absence of a significant decline over the period 1990-1993. Since he has used an inflation adjusted index which increased by 8.8% over this time period, Prof. Hall's graph actually demonstrates that nominal revenue per minute barely decreased over the period 1990-1993 and actually may well have increased over the period 1991-1993 when both cellular price and other long distance prices were decreasing. Indeed, in Prof. Hall's Figure 5, it is quite clear for the period 1990-93, that revenue per minute, net of access charges, increased given the general inflation over this period. However, we know that IXC costs decreased over this period. Increasing revenue per minute with decreasing costs demonstrates the uncompetitive outcome in the long distance market.

17. Mr. Sullivan, an AT&T affiant, in his discussion of long distance "conduct and performance" (pp. 24ff.) never actually analyzes price data for residential and small business customers.[26] Instead, he uses a (long ago) discredited approach to claim that structural characteristics mean that competition must be flourishing in the long distance market. (p. 27) But actual prices paid by residential and small business consumers prove otherwise. Mr. Sullivan further tries to mischaracterize my previous affidavit by saying I only consider tariff rates and ignore discounts. (p. 27) He is absolutely wrong in this claim. In my previous affidavit I focused on the FCC Basket 1 price cap which includes all AT&T discounts to residential and small business customers. (Hausman aff., ¶¶ 6, 25-37)[27] Mr. Sullivan never discusses why AT&T has been at the Basket 1 price cap maximum for each

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[26] Mr. Sullivan's only use of AT&T average revenue data quotes from a previous AT&T study which considers all long distance customers (p. 28). It is for residential and small business customers where the above competitive long distance prices are currently being charged.

[27] In January 1995, the FCC removed from price cap regulation all commercial long distance services offered by AT&T with only 2 minor exceptions.

of the last 5 years.

18. Prof. Hubbard and Lehr's response to my claim that price caps, not competition, are setting prices for residential and small business long distance is to claim that regulators got the index just right in 1989 and AT&T's productivity gains are just at the 3% price cap formula.[28] HL provide no evidence that AT&T's productivity gains are this low; based on my experience with other telephone companies I believe that the productivity gains are approximately double the amount. Alternatively, HL state that the FCC may have set Basket 1 prices "too low" in 1989. (p. 14) Other AT&T affiants, Prof. Bernheim and Willig, make this same claim that Basket 1 prices are set "below competitive levels." (pp. 136-137)[29] This argument totally ignores the fact that the BOCs want to enter the market to provide interLATA long distance service. Even if Hubbard and Lehr and Bernheim and Willig are correct that FCC regulated prices are "too low" for AT&T, no basis exists to think they are too low for the BOCs who want to enter the market. Since the purpose of the antitrust laws is to protect competition and not to protect competitors, the BOCs should not be protected from "too low" prices by the MFJ. They should be allowed to enter the market.[30]

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[28] Prof. Bernheim and Willig, on behalf of AT&T, claim that average revenue per minute (ARPM) has declined faster than the price cap index. (p. 149) They provide no data and fail to realize that the price cap index is calculated net of access costs. If Prof. Hubbard and Lehr's Figure 3 is used, AT&T's ARPM between 1990-1993 is essentially constant in nominal terms. Since the inflation adjustment was less than the productivity factor, over this time period AT&T's ARPM decreased less than the price cap formula because of "exogenous" changes in increased accounting costs which I discussed in my original affidavit. Thus, the claim by Bernheim and Willig is demonstrated to be incorrect by actual data put forward by AT&T through its other witnesses, Hubbard and Lehr.

[29] BW give no data but claim that "quantitative analysis by AT&T confirms that regulated prices do not cover the incremental costs of serving low volume customers." (p. 150) Even if this statement is supported by some (unspecified) data, it fails to explain why the BOCs want to enter the market.

[30] AT&T's claim that they are not earning enough money in Basket 1 services (Hubbard and Lehr, fn. 16) is merely another attempt to stop increased competition. I am unaware of previous instances when the antitrust laws have been used to stop entry because an incumbent was not earning enough money on its investment.

19. Prof. Bernheim and Willig refer to the argument that Basket 1 prices are set too low by the FCC as their "central observation". (p. 138) This claim is based on no data and is inconsistent with the request of the BOCs to enter the market to compete for these customers. Indeed, costs which BW identify to serve low volume customers, e.g. billing, collections, fraud, and customer service (p. 136) are all already covered by the BOCs current participation in intraLATA long distance. Thus, the BOCs would not incur extra costs in these categories to provide interLATA long distance. These economies of scope would allow BOCs to offer lower long distance prices to consumers, making consumers better off.[31] AT&T and the other IXCs should not be protected from this pro-competitive outcome.

20. Moreover, Profs. Hubbard and Lehr have one glaring omission in their discussion of changes in long distance prices. Neither they (nor other AT&T affiants) ever explain why AT&T is able to raise its prices in responses to AT&T-specific accounting changes such as the change in SFAS 106 which I discussed in my original affidavit. (Hausman, ¶ 29) A basic tenet of economic theory is that a competitive firm cannot increase its prices for firm-specific increases in costs unless other firms in the industry are subject to the same cost increase. Neither MCI nor Sprint were subject to increases nearly as large as AT&T. More importantly, the price increase resulted from an accounting change, not an increase in economic costs. Under the FCC's price cap rules, AT&T was allowed to increase its prices since the accounting change was considered an exogenous change (Z factor) in the price cap index. However, if the long distance industry were competitive, competition from MCI and Sprint would not have allowed AT&T to increase its Basket 1 prices. Prof. Bernheim and Willig, on behalf of AT&T, admit that, at least on 1 occasion,

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[31] Mr. Sullivan for AT&T attempts to claim that economies of scope do not exist (p. 32) for BOCs, but arise merely from cross subsidy. This claim is absurd and is contradicted by market evidence. AT&T has used BOCs to do long distance billing in many regions, a clear economy of scope because the BOCs send a local bill each month. Also, use of the network for both intraLATA long distance and interLATA long distance is an economy of scope for a BOC. Mr. Sullivan's denial of the existence of economies of scope in networks is a claim that no economist would make.

MCI and Sprint did follow AT&T's accounting (non-economic) based price increase (p. 151). However, they claim that discount plan activity increased around that time as well. They do no analysis of the other 5 times in the last 3 years when AT&T increased price and MCI and Sprint followed. Indeed, BW never examine long distance prices at all, but still claim that based on theoretical arguments (but no data) that Basket 1 services are competitive.

21. Prof. Hall's examination of AT&T's performance under FCC price cap regulation (Hall aff., pp. 22ff) is economically incorrect. Prof. Hall subtracts out the exogenous changes (¶ 57, p. 23) to consider "AT&T's Price Net of Access Charges" in his Figure 6. As I explained above, most of these "exogenous changes" have no economic basis, but instead are mere changes in FASB accounting standards. Thus, no economic basis exists to subtract out the exogenous changes.[32] Also, Prof Hall's Figure 6 demonstrates that residential and small business long distance prices actually <u>increased</u> over the period 1992-1994 even after he takes out the effects of inflation. Thus, in spite of decreasing costs for telecommunications services, AT&T's charges were increasing. This outcome should not happen if an industry is competitive.[33]

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[32] AT&T's affiants, Prof. Hubbard and Lehr do not subtract out the "exogenous changes" in their analysis of AT&T's price performance under FCC price cap regulation. Presumably, they realize that this subtraction would be wrong as a matter of economics.

[33] Prof. Hall also fails to note in his discussion of competition in the long distance industry (pp. 26-27) that AT&T has been up against the price cap limit each year for residential and small business customers. Thus, regulation, not competition, from either MCI, Sprint or the smaller carriers he discusses, is the constraining factor for AT&T Basket 1 prices. The industry is not competitive when a regulatory price ceiling is constraining the largest carrier's prices. Professor Kwoka, who submitted an affidavit on behalf of Sprint, agrees that AT&T remains the "dominant firm for many interexchange services, [and] adequate competition in that market does not yet exist." (p. 3, p. 28) However, Prof. Kwoka does not favor BOC entry to solve the competitive problem. Prof. Kwoka's conclusion of AT&T's dominance contrasts sharply with the claim of AT&T affiants Bernheim and Willig who claim (based on no data) that AT&T is not a dominant firm. (p. 145) Dominant firms set prices in markets. AT&T is clearly the price setting firm for Basket 1 long distance services.

22. Prof. Hubbard and Lehr go on to argue that "lock step" pricing by the major IXCs is consistent with competition. (p. 48) Here HL go badly wrong. They are correct only if economic costs of all of the IXCs are also increasing in "lock step". But the economic costs are not changing by the same amount. Indeed, FCC price cap regulation allows AT&T to increase its prices and MCI and Sprint follow even though their economic costs have not changed.[34] Rising prices which are unrelated to increases in economic costs exemplifies the absence of competition in Basket 1 long distance services.

C. Anti-competitive Price Discrimination in Cellular Long Distance

23. Prof. Bernheim and Willig (BW) argue that my example of anti-competitive price discrimination against cellular long distance customers is "seriously deficient" because I only consider the cost "of a single input (access)." (p. 147)[35] BW fail to mention that the IXCs have continuously claimed (including in this proceeding) that access is by far their largest cost, representing approximately 45%-50% of total costs. Thus, BW's attempt to minimize the importance of differences in access costs between cellular and landline long distance is seriously off-base.[36] Indeed, BW do not contest my estimate that AT&T's overall costs are 27% less for cellular long distance service (Hausman aff., ¶ 41), yet AT&T charges the same prices for cellular as for landline long distance. BW's other attempt to minimize this anti-competitive outcome is to claim that cellular long distance is a "tiny slice of the market". (p. 147) Currently, 25 million cellular customers exist with a growth rate of 45-50% per year. Thus, the IXCs (and non-BOC cellular carriers which follow the IXCs prices for cellular long distance) are

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[34] I discuss the most recent example of this lock step behavior which occurred in December 1994 above.

[35] Mr. Sullivan for AT&T makes a similar claim. (p. 29)

[36] BW point to fraud as a possible extra cost, but they fail to point out that fraud cost the cellular industry only 3.7% of revenue in 1994 which is far less than the difference in access charges which I discuss in my affidavit. (See Communications Daily, Feb. 3, 1995)

overcharging the approximately 80% of cellular customers who buy Basket 1 services for long distance service an amount equal to approximately $580 million per year.[37] Over 1/2 billion dollars per year growing at 50% per year seems to be a significant "slice" of anti-competitive cake to me--but perhaps BW (and AT&T) have Marie Antoinette in mind.

D. Potential Problems with BOC Entry into InterLATA Long Distance

24. No affidavit in this proceeding would be complete without discussion of possible discrimination and cross subsidy. Professors Hubbard and Lehr devote one paragraph to each topic. (pp. 46-47) On discrimination, HL state that the absence of a regulatory problem can be guaranteed if the BOCs are not allowed to provide interLATA long distance. They fail to note the current cost to consumers from higher prices arising from the BOC's inability to provide interLATA services. Furthermore, the FCC, which is the regulator in charge of equal access, has consistently stated that it believes that BOC entry into long distance would be pro-competitive.[38]

25. On cross subsidy the example used by Prof. Hubbard and Lehr is incorrect. They claim that carrier access costs in excess of true incremental costs would be an "anti-competitive weapon." (p. 46) Price in excess of incremental cost is not anti-competitive; indeed, another AT&T affiant, Professor William Baumol, published a book last year which demonstrates this basic economic fact.[39] Under a regulatory "imputation" rule, the minimum price the BOCs charge for long distance would have to exceed their own

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[37] This calculation follows using the average cellular bill of $59 per month (CTIA, Dec. 1994) and uses the fact that about 15% of the average cellular bill is long distance revenue.

[38] The FCC has consistently called for a removal of the MFJ line of business restrictions in each review of the MFJ; e.g. in 1987 the FCC stated that "we contend that the Court should lift the decree's restrictions on interstate, interexchange services on the basis of the Commission's commitment to address these admittedly difficult questions prior to BOC entry." (Reply Comments of the FCC as Amicus Curiae, May 22, 1987).

[39] W. Baumol and G. Sidak, Toward Competition in Local Telephony (Cambridge, MA, 1994).

incremental cost plus the contribution (price minus marginal cost) of carrier access.[40] Since this minimum price would only be about 4 cents per minute, no anti-competitive problem would arise.[41] The imputation rule has been adopted by California (Decision 94-09-065, Sept. 15, 1994), as well as other states, and no obstacle exists to employing it at the federal level.[42] Under the imputation rule, economic efficiency is assured since an efficient low cost firm which purchases access will be able to compete without an anti-competitive "price squeeze" occurring. Thus, the "possibility" of cross subsidy advanced by HL is incorrect and demonstrates the extent to which AT&T's affiants must strain to invent anti-competitive examples given regulatory changes which have occurred over the past 10 years.

26. Prof. Baumol also describes the potential problem that access costs will be too high for both the BOC and for the IXCs. (p. 8) This potential problem can be handled by regulation as it is today. Access prices currently

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[40] See J. Hausman, "The Proliferation of Networks in Telecommunications" 1993, forthcoming in W. Sichel and D. Alexander, Networks, Infrastructure, and the New Task for Regulation, (Univ. Michigan Press, 1995) and J. Hausman and T. Tardiff, "Efficient Local Exchange Competition", forthcoming Antitrust Bulletin, 1995 for a further discussion of this topic. Carrier access price equal to incremental cost would be economically efficient as I explain, but imputation stops any anti-competitive behavior. I find it remarkable that in his affidavit in this proceeding, Prof. Baumol describes imputation as difficult and based on "very sophisticated concepts". (pp. 7-8) He supported the imputation approach in testimony for AT&T in 1991 when AT&T petitioned to enter the intraLATA long distance market in California, and the procedure has been implemented in California. (See CPUC Decision 94-09-065, Sept. 15, 1994). Thus, Prof. Baumol's fear of a possible vertical price squeeze (p. 26) is eliminated, as he testified in California in 1991.

[41] The minimum price is calculated by taking the current price of interLATA access, at both the originating and terminating end of the call, which is about 5 cents per minute and calculating the contribution (price minus incremental cost) which is about 2.5 cents per minute. The incremental cost of a BOC producing a long distance call is about 1.5 cents per minute. The total of the contribution and the incremental cost is thus about 4 cents per minute.

[42] Dr. Cornell, an MCI affiant, discusses possibilities of "price squeezes" (pp. 9-10). However, she fails to note that California has already solved the problem and rejected her similar claims (Cornell aff. p. 56) made on behalf of MCI in that proceeding, CPUC Decision 94-09-065, Sept. 15, 1994. In her subsequent discussion of imputation (p. 45) she misunderstands the fundamental character of competition. Under her approach all vertical integration would be harmful because the "incumbent is simply paying itself the money" (p. 45). Almost all economists agree that vertical integration is pro-competitive and helps consumers in most situations.

contain a contribution which is used to provide below cost residential basic exchange service. This contribution has been reduced significantly over the past ten years, and regulators can reduce it even further. More importantly, even if "too high" access costs occurred, it would not distort competition between the BOCs and IXCs.[43] The problem is completely independent from the question of whether BOC entry into long distance markets would lead to an overall increase in long distance competition.

27. AT&T affiants Prof. Bernheim and Willig attempt a theoretical attack to claim that leveraging will lead to competitive problems. (p. 13) They are wrong on both the theory and the facts. With respect to theory, consider the case where a BOC sells access at a price above marginal (incremental) cost--which is certainly the actual situation. I assume that the contribution (price minus cost) per minute is 2.5 cents. I will assume that absent regulation the BOC might be able to price high enough to earn an extra 2 cents per minute. BW agree that the long distance component is also priced above marginal cost, with the approximate amount at least 8 cents per minute. A BOC which enters the long distance market has an economic incentive to lower the total contribution from its current amount of 10.5 cents per minute because it would now earn the total contribution for the long distance minutes it sells.[44] The BOC takes account of the overall contribution when it provides long distance, while in the current situation neither the BOC nor

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[43] Professor Baumol himself has recently demonstrated this fact in consulting he has done for Telecom New Zealand. See W.J. Baumol, "The Efficient Component Pricing Rule: Misapprehension of Drs. Tye and Lapuerta", 1995 mimeo.

[44] Where BW go wrong as a matter of theory is that when only selling access (which is about 45%-50% of IXC cost) BOCs face a low price elasticity because a 1% increase in access costs translates into a 0.5% increase in IXC costs. If a BOC offers long distance service it faces the overall price elasticity for the entire service so it has an incentive to not charge as high a price as originally for the access component. Alternatively, if a BOC raises access price currently, long distance demand would decrease and the BOC would sell less access, losing the contribution on the minutes which are no longer demanded. When the BOC provides long distance as well as access, it loses the contribution from access as before, but it also loses the contribution from its share of overall long distance demand which has decreased. Thus, the BOC will have a reduced economic incentive to raise access price.

the long distance company considers the overall contribution since they each provide a single component of the long distance service. The fact which BW miss is this implicit assumption that long distance is sold at marginal cost in their theoretical example, even though at another point in their affidavit they claim (correctly) that long distance prices are above marginal cost. (p. 9) Indeed, this economic incentive to offer a lower price for long distance is recognized by other intervenor economists. (e.g. Prof. Hall for MCI (p. 11)) As the DC Court of Appeals has ruled (along with other courts), leveraging is only a problem if the downstream (here long distance) price goes up, and here the clear prediction is that long distance prices will go down with BOC entry.[45]

28. Prof. Bernheim and Willig also bring up a hypothetical potential problem for pricing of a new service under price caps. (p. 83) They fail to note that regulators typically do not set prices for new services since they are considered to be "discretionary" and a BOC does not have market power with respect to the new service.[46]

29. Prof. Kwoka, for Sprint, also finds that changes in regulation, especially price caps which I discussed in my first affidavit (¶¶ 18-20, 61) are not sufficient: "Perfect regulation, however, does not and will not exist." (p. 15) I agree. However, this perfection standard used by numerous economists (e.g. Kwoka, Perry pp. 25-27) in their affidavits for the IXCs is misguided. Competition is (almost) never perfect either, and Prof. Kwoka agrees that competition in long distance markets is "inadequate". (p. 3, p. 28) However, Prof. Kwoka states that "demonstration of the inadequacy of interexchange competition is largely irrelevant to the case for lifting the Decree restrictions." (p. 31) I find this claim to be extremely curious. The relevant question to an economist is whether BOC entry into long distance,

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[45] U.S. v. Western Elec. Co., 900 F.2d 283, 296. (D.C. Cir. 1990)

[46] The FCC does not incorporate new services into price caps immediately, nor do most states, e.g. Connecticut, Ohio, and California. Regulators have realized that incentives for innovation are increased when new services are not incorporated into price caps.

even with imperfect regulation, will benefit consumers by increasing the inadequate imperfect competition in the long distance market that Prof. Kwoka agrees exists. Prof. Kwoka advances no other way in which the "inadequate competition" which he describes will change to effective competition which would lead to lower long distance prices to residential consumers.[47]

30. No human undertaking, regulation included, is perfect. Yet the opposing economists have set up perfection as their standard. Prof. Kwoka, for example, criticizes price-cap regulation adopted by the FCC and many states because the regulation is not pure. (pp. 16-17, p. 22)[48] He agrees that "pure price caps" would offer an improvement; but in his opinion price cap plans which fail to reach perfection are fatally flawed and "reliance upon price caps is misplaced." Yet most economists recognize that the price cap plans, while admittedly still retaining some elements of rate of return regulation, do substantially decrease any incentives for a BOC to cross subsidize. As the FCC modestly concluded: "Incentive regulation, by in large measure removing the incentive to misallocate costs between services, may mitigate misallocation as a regulatory concern." (In the Matter of Policy and Rules Concerning Rates for Dominant Carriers, CC docket No. 87-313, Adopted September 19, 1990, ¶ 34).[49]

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[47] Prof. Kwoka agrees that BOC entry might increase competition, at least initially (p. 31), but that "incumbency could be used to impair rivals and competition in the long run". (p. 34) Here he forgets Lord Keynes' famous maxim that in the long run we are all dead. This aspect of Keynesian economics still receives wide agreement among economists. Given rapid technological change in telecommunications, the appropriate inference is in the not very long run any remnants of BOC "monopolies" will be eliminated.

[48] This exact claim of "impure" price caps arose in the 1991 Information Services Remand Proceeding. The DOJ did not find possible cross subsidy under price caps to be a problem in that proceeding. (Memorandum of the US in Support of Motions for Removal of the Information Services Restriction, pp. 33-35, U.S. v. Western Elec., Aug. 22, 1990). In turn, the DC Court of Appeals found "a lot of evidence" contradicting theories that cross subsidization might occur. (U.S. v. Western Elec., 993 F.2d 1572, 1580, D.C. Cir 1993). The evidence against possible cross subsidy is even stronger here, especially since additional states have adopted substantial price cap regulation since 1991.

[49] AT&T affiants Prof. Bernheim and Willig reach the quite different conclusion that "there is absolutely no reason to believe...that regulatory reforms have substantially curtailed the RBOCs' incentives for cost

31. Price caps eliminate the potential problems that Prof. Baumol claims may exist, e.g. misallocation of costs. (pp. 26-27) Indeed, Prof. Baumol recognizes that price caps have largely replaced rate of return regulation where his purported problems may arise. (pp. 30-31) But he again raises the perfection standard. (p. 31, ¶ 56) I find this emphasis on perfection to be seriously misguided.[50] First, the MFJ itself speaks of a "substantial possibility" of impeding competion. Furthermore, to an economist perfection is never an applicable standard. The relevant question is whether BOC entry into the uncompetitive long distance market would benefit residential and small business customers who are currently paying above competitive prices.[51] Neither Prof. Baumol, nor Prof. Kwoka, provides any analysis demonstrating that the "perfection standard" is relevant to answering this important question.

32. Prof. Kwoka (and Prof. Baumol, pp. 26-27) fails to address the important point recognized in the application of the MFJ since 1989, that cross subsidy only becomes an antitrust problem if AT&T and the IXCs were forced to exit the long distance markets through a cross subsidy which led to

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misallocation." (p. 86) Once again no amount of change is sufficient for BW to recognize any improvement in economic conditions for competition.

[50] Prof. Bernheim and Willig attempt to refute the usefulness of price caps because local exchange prices are lower in states which use price caps. (p. 85) Their reasoning appears to require the assumption that LECs are using cost misallocation in these areas where price caps exist. They completely miss the point, recognized by almost all economists, that price caps give a powerful incentive for a regulated firm to reduce its costs, relative to outdated rate of return regulation. Thus, price caps are adopted and prices decrease because of the productivity factor built into the price caps. The LEC also benefits from reduced costs. This example is yet another illustration that BW are not about to be dissuaded by any amount of data, even when consumers benefit from lower prices.

[51] Prof. Hall brings up purported problems of vertical integration which he claims may harm consumers. (p. 3) In his discussion he refers to the 1954 consent decree that Kodak signed with the government which forbids bundling of films and processing. (pp. 3-4) He fails to note that this consent decree was recently vacated by the District Court over the objections of the DOJ and Kodak's competitors. The Court found that competition would be increased if bundling were permitted and stated that Courts must be mindful not to let competitors use "the Sherman Act be invoked perversely in favor of those who seek protection against the rigors of competition." (US v. Kodak, 853 F. Supp. 1478, (WDNY 1994)).

predation.[52] However, as I discussed in my initial affidavit (¶¶ 16-17), such a predatory outcome is impossible. The marginal costs of providing long distance service are quite low compared to price, as even AT&T affiants Hubbard and Lehr recognize. (HL Aff., p. 27) Thus, the prices would have to be very low before predation would be possible--less than 25% of current levels. Also, the BOCs would begin with a zero share and the 3 major IXCs all have complete national fiber optic networks in operation. Long distance markets are truly a situation where predation is unlikely to be tried and even less likely to be successful.[53]

33. The claim by Profs. Bernheim and Willig that access charges could "cross-subsidize" the BOCs' long distance operations (p. 36) is based on a complete absence of economic logic.[54] Almost all economists (except BW),

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[52] Prof. Hall makes the identical argument on cost shifting (p. 43-44) which was rejected by the DC Court of Appeals in the Information Services Remand proceeding. He admits that BOC entry could well lead to lower long distance prices to consumers, but he claims that if some cost shifting were to occur economic efficiency might decrease. He is just as wrong here as he was in 1990. Because residential local service is currently subsidized (as Prof. Hall agrees) and because its elasticity is near zero while the long distance elasticity is significant (about 0.7), cost shifting which would reduce the subsidy for local service will increase economic efficiency and consumer welfare. I calculated this potential gain to be over a billion dollars per year; see J. Hausman, T. Tardiff, and A. Belifante, American Economic Review, 1993. I discuss the theory which Prof. Hall misapplies in J. Hausman, "Exact Consumers Surplus and Deadweight Loss", American Economic Review, 1981. Prof. Bernheim and Willig make the same mistake in their discussion of possible cost misallocation. (pp. 29-31, p. 33) They claim that local service could be "artificially inflated", but they fail to recognize that residential local prices are currently "artificially deflated" below marginal cost. Only cost shifting which leads to predation will cause competitive harm beginning from the current situation. Even Prof. Hall and Profs. Bernheim and Willig do not claim that predation is possible.

[53] Matsushita Elec. Indus. v. Zenith Radio Corp., 475 U.S., 574, 589 (1986). In a recent case in which I was involved, the District Court found that "the Government could not cite one modern example of successful predatory pricing...". (US v. Kodak, 853 F. Supp. 1478, (WDNY 1994)). Also, in spite of numerous private litigation, pre-divestiture AT&T was never found to have engaged in predatory pricing.

[54] Mr. Sullivan for AT&T claims (without any support) that Sprint's market share is "three times higher" where it controls the LEC. This claim is incorrect as I stated in my original affidavit (¶ 24, fn. 14). The data in the Sprint-Centel merger investigation clearly demonstrated that Sprint's share is not higher in these areas. Mr. Sullivan may be referring to a New York Times article (Aug. 23, 1992) which indicated three times higher Sprint shares in an area of rural North Carolina (Tarboro, NC) which did not have equal access, presumably because the IXCs did not want to serve the area.

including AT&T's affiant Prof. Baumol, agree that cross subsidy occurs when the subsidized product is priced below incremental cost. BW have not constructed an example where the BOCs would be pricing long distance (including access) below incremental cost. Their example merely has the BOCs charging a lower price for long distance service than the IXCs--an outcome which would benefit consumers.[55]

34. The affidavit of Dr. Cornell, on behalf of MCI, typifies the anti-competitive effect of the MFJ. Dr. Cornell provides absolutely no data demonstrating that prices are higher for services affected by regulatory debates which she has participated in for MCI. If prices are not higher, consumers have not been harmed although MCI might not have liked the outcome. Indeed, Dr. Cornell does not even attempt to show that prices for intraLATA long distance have not performed well although BOCs compete with IXCs to offer those services. Instead, she repeats claims, most of which have been rejected by state regulatory commissions, e.g. the California PUC, as to how her clients have been disadvantaged. Competitors have historically used regulation to attempt to limit competition.[56] The MFJ provides another layer of regulation which MCI uses to limit competition. But where have the interests of consumers gone? Dr. Cornell never discusses why lower long distance prices would not be a good outcome for consumers.

However, overall shares were not higher in equal access areas and, of course, the DOJ approved the Sprint-Centel merger in spite of Centel controlling local exchange service in the Las Vegas area.

[55] Mr. Sullivan for AT&T (p. 31) also fears that a BOC would reduce the price of long distance services to consumers. The common theme among AT&T affiants that price might actually decrease to consumers because of BOC entry demonstrates the effect that additional competition in interexchange markets would create.

[56] In a recent paper I discuss how the FCC delayed over 10 years before allowing cellular telephone service to begin in the US because of regulatory debates, J. Hausman, "The Cost of Regulation of Cellular Telephone", Jan. 1995. The cost to US consumers was about $25 billion per year. Also, in recent testimony before the FCC, I discuss how regulatory debates delayed the introduction of voice messaging again by about 10 years. I estimate the cost to US consumers from this delay to be about $5.7 billion per year. See J.A. Hausman and T. J. Tardiff, "Benefits and Costs of Vertical Integration of Basic and Enhanced Telecommunications Services", April 1995.

E. Competitive Alternatives for BOC Customers

35. Prof. Baumol states that households and smaller businesses have "no practical alternative" to BOC delivery of telecommunications services. (p. 3, p. 13) He fails to note that these residential customers and small businesses are currently being charged above competitive long distance prices as I demonstrated in my first affidavit and discuss above. Indeed, I find it remarkable that Prof. Baumol (similar to Prof. Kwoka) does not provide any economic analysis to dispute the demonstration that the IXCs are charging above competitive prices to these customers. Furthermore, Prof. Baumol is incorrect in his claim that "no practical alternative" exists to serve residential and small business customers. These practical alternatives exist and are currently in use in the UK--cable and digital cellular (PCS) access.

36. MCI's affiant Prof. Hall's similar claim that neither cable nor PCS access is available anywhere is incorrect. (p. 10) Both are widely available in the UK. For instance, about 80% of cable households in the UK buy local exchange and long distance access from their cable provider, rather than British Telecom.[57] The similar claim by Prof. Bernheim and Willig that the local exchange is a natural monopoly (p. 3, pp. 42-44) is refuted by the same UK experience. This level of penetration by cable providers in the UK has been accomplished in under 3 years of competition.[58] The UK experience also

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[57] Source: UK Cable Communications Association, "The Case for Cable", April 1995, p. 8. As of January 1995, 81% of UK cable subscribers also subscribed to cable provided local telephone service. MCI's other affiant, Dr. Cornell, claims that it will take "years to accomplish" (p. 24) what she identifies as the prerequisites for local competition. She ignores the experience in the UK where local competition for residential customers has become reality in a very brief period.

[58] Recently, a UK cable company which provides telephony announced it would go public and is valued at over $700 million. (NY Times, May 16, 1995) Thus, BW's claim that the "road to widespread commercial success is likely to be long and littered with both foreseen and unforeseen obstacles" (p. 50) has already proven to be incorrect. The DOJ statement that BW quote considers all of the UK while cable franchises have not even been allocated in all areas. Indeed, cable TV, while it increased by 50% in the UK last year, still only is available to about 20% of British households. The comparable number in the US is about 96%. The much more relevant statistic is the number of households who choose cable telephone when it is available in the UK. That percentage is quite high, around 80%. (BW recognize this point in a different context, p. 62)

refutes BW's incorrect conclusion that "premature interLATA relief has the potential to stifle the development of new access alternatives..." (p. 23) British Telecom has never been precluded from providing long distance service in the UK, yet new access alternatives are much more developed in the UK than in the U.S. where the BOCs have been excluded from the long distance market. However, even this amount of competition would not be enough for BW since they claim that duopoly competition would not be sufficient to remove the MFJ (p. 52). BW, along with AT&T, clearly never expect to see the MFJ restrictions removed although the "bottleneck" theory of the MFJ would disappear with cable competition.[59]

37. Both PCS access and cable have been demonstrated to be economically competitive. Both will soon be available in the U.S. Numerous cable companies have announced their entrance into local access markets and the PCS auctions are currently ongoing. Would-be PCS providers have already bid over $7 billion for broadband PCS licenses, an important economic indication that they expect the technology to be competitive.

38. AT&T is the largest cellular provider in the U.S. after its recent purchase of McCaw. AT&T/McCaw's cellular networks cover about 30% of the U.S. population including many of the largest MSAs, such as New York, Los Angeles, San Francisco, Philadelphia, Dallas, and Houston. AT&T is also the largest

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[59] BW take the position that so long as market power exists and is regulated, the MFJ should stay in place. Note that the FCC has determined that AT&T has market power in Basket 1 services for long distance, and FCC price cap regulation clearly constrains AT&T prices as I demonstrated in my first affidavit. (Hausman aff., ¶¶ 25-29) Thus, AT&T's involvement in equipment manufacturing should draw the same censure from BW that they propose for the BOCs. No amount of competition, apart from perfect competition, seemingly will suffice for BW to agree that the MFJ restrictions should be removed. BW's speculation that the UK experience is not relevant to the US (p. 58) is contradicted by announcements that Time Warner, the second largest cable company in the US, is constructing cable telephone service throughout its cable service areas. ("Now, Time Warner is a Phone Company", Business Week, Nov. 21, 1994). Another AT&T affiant, Mr. Sullivan, totally ignores the UK experience when he discusses the alleged difficulties of cable and radio. (pp. 12-15)

manufacturer and provider of cellular network equipment in the U.S.[60] AT&T could use its cellular spectrum to provide long distance access to residential and small business customers. Furthermore, since the PCS spectrum auctions are currently ongoing, AT&T can buy sufficient additional spectrum to cover the vast majority of the U.S. In the first set of (broadband) PCS auctions, AT&T purchased spectrum in 21 markets, bidding a total of $1.7 billion. Thus, the combination of McCaw's cellular spectrum and PCS spectrum will allow AT&T to provide wireless long distance access on an economic basis.

39. Mercury, the second largest long distance company in the UK, is currently providing such service. Its "One-2-One" service, which is free during off peak hours, provides PCS service, which includes both mobile service and access to the Mercury long distance network without depending on the British Telecom network. While cellular is currently capacity constrained in some large MSAs in the U.S., this capacity constraint will be eliminated as U.S. cellular carriers switch from their current vintage 1960's analog transmission networks to modern digital transmission networks which are already in use in the UK, Germany, Australia, Hong Kong and numerous other locations. These digital networks offer an increase of capacity of 3-4 times over current analog technology for TDMA or a 10-20 times increase for CDMA.[61] AT&T is a leader in both new technologies. For instance, take Los Angeles. With a 5 times increase in capacity over current analog technology, AT&T could service <u>all</u> of its residential and small business long distance customers in the Los Angeles MSA with digital cellular technology, which has transmission quality as good as current landline technology.

40. However, to provide effective competition AT&T would not have to serve all of its customers. Since competition occurs on the margin, AT&T would only have to provide combined cellular/long distance service to a

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[60] AT&T is among the three largest cellular network providers in the world. (NATA, 1995 Telecommunications Market Review and Forecast, p. 143, 1995)

[61] AirTouch has announced it will begin construction of its CDMA networks in mid-1995.

significant fraction of its larger residential customers to provide competitive discipline to possible anti-competitive actions.[62] A BOC could not be certain which customers had the cellular option and thus, a BOC could not selectively discriminate against customers without the cellular option. Also, as was demonstrated in the Information Service Remand proceedings, a BOC does not have the technical ability to discriminate selectively against data transmission or terminating calls.[63] Thus, AT&T currently has the ability to discipline a BOC through its cellular networks in the U.S. These cellular/PCS networks will be expanded rapidly with the additional PCS spectrum.[64] Thus, AT&T has the "practical alternative" referred to by Prof. Baumol. AT&T can use this practical alternative to defeat an attempted BOC anti-competitive action against its long distance customers.

II. PRO-COMPETITIVE EFFECTS FROM BOC ENTRY INTO INTERLATA MARKETS

41. Profs. Hubbard and Lehr claim that the BOCs are not the only firms capable of successful competitive entry into long distance services since they are not unique in their expertise. (pp. 41-42) As I explained above, competitive entry causing AT&T to price competitively has not occurred. Instead FCC regulation has set AT&T's prices with MCI and Sprint content to

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[62] According to economic estimates I have made, AT&T can provide free cellular handsets to the 1/3 of its customers with the highest calling volumes to make off peak long distance calls and benefit economically from not having to pay carrier access fees to the BOCs.

[63] Profs. Bernheim and Willig claim that terminating access alone gives a BOC the ability to leverage market power into adjacent markets. (p. 15) This statement is clearly wrong since about 90% of all cellular calls terminate on a BOC landline network, but no intervenor has claimed here that a BOC discriminates against a non-BOC (e.g. McCaw) cellular company. Thus, the hypothetical network externality example of BW (pp. 16ff.) has already been proven wrong by the experience in cellular telephone. Prof. Hall's statement that cellular systems use LEC facilities to connect to long-distance carriers (p. 11) is generally correct for BOC cellular carriers. However, as I demonstrated in my affidavits in the generic cellular proceeding, non-BOC cellular companies typically used non-switched facilities which are very often not BOC provided. (Hausman aff., Aug. 31, 1994, p. 13, ¶ 25)

[64] Digital cellular and PCS use very similar technology and provide virtually identical services.